

CLAIMS

1 1. An electronic transaction method using an
2 electronic coupon in an electronic transaction system
3 comprising an electronic shop server opening an
4 electronic shop site on Internet to operate and manage
5 said electronic shop site, a coupon
6 issuance/management server issuing and managing an
7 electronic coupon having pecuniary value information
8 usable in a settlement of an electronic transaction
9 for said electronic shop site, and an information
10 terminal being able to access to said electronic shop
11 to carry out an electronic transaction, said
12 electronic transaction method comprising the steps
13 of:

14 requesting said coupon issuance/management
15 server to issue said electronic coupon from said
16 information terminal;

17 when said coupon issuance/management server
18 receives the issue request, issuing, from said coupon
19 issuance/management server, said electronic coupon
20 having said pecuniary value information and owner
21 identification information based on information
22 characteristic of said information terminal to said
23 information terminal;

24 recording, by said coupon
25 issuance/management server, said owner

26 identification information of said electronic coupon
27 as coupon management information in a transfer
28 management memory of said coupon issuance/management
29 server and managing said owner identification
30 information by said coupon issuance/management
31 server; and

32 changing, by said coupon
33 issuance/management server, said owner
34 identification information in said transfer
35 management memory according to a transferee apparatus
36 of said electronic coupon.

1 2. The electronic transaction method according to
2 claim 1, wherein said information terminal transfers
3 said electronic coupon to said electronic shop server
4 being as said transferee apparatus due to an
5 electronic transaction in said electronic shop site,
6 and notifies said coupon issuance/management server
7 of the transfer; and

8 in response to the notice, said coupon
9 issuance/management server changes said owner
10 identification information in said transfer
11 management memory to information characteristic of
12 said electronic shop server.

1 3. The electronic transaction method according to
2 claim 1, wherein said information terminal transfers

3 said electronic coupon to another information
4 terminal being as said transferee apparatus and
5 notifies said coupon issuance/management server of
6 the transfer; and

7 in response to the notice, said coupon
8 issuance/management server changes said owner
9 identification information in said transfer
10 management memory to information characteristic of
11 said another information terminal.

1 4. The electronic transaction method according to
2 claim 3, wherein said another information terminal
3 transfers said electronic coupon to said electronic
4 shop server being as said transferee apparatus due to
5 an electronic transaction in said electronic shop site
6 and notifies said coupon issuance/management server
7 of the transfer; and

8 in response to the notice, said coupon
9 issuance/management server changes said owner
10 identification information in said transfer
11 management memory to information characteristic of
12 said electronic shop server.

1 5. The electronic transaction method according to any
2 one of claims 1 through 4, wherein said coupon
3 issuance/management server affixes electronic
4 signatures on said pecuniary value information and

5 said owner identification information of said
6 electronic coupon with different encryption keys.

1 6. The electronic transaction method according to
2 claim 5, wherein said coupon issuance/management
3 server affixes said electronic signatures on said
4 pecuniary value information and said owner
5 identification information with a server private key
6 characteristic of said coupon issuance/management
7 server and a user private key characteristic of a user
8 of said information terminal, respectively.

1 7. The electronic transaction method according to
2 claim 5 or 6, wherein said transferee apparatus
3 transferred said electronic coupon sends said
4 electronic coupon to said coupon issuance/management
5 server to request said coupon issuance/management
6 server to verify validity of said electronic coupon;
7 said coupon issuance/management server
8 verifies the validity of said electronic coupon on the
9 basis of said electronic signatures affixed on said
10 electronic coupon and notifies said transferee
11 apparatus of a result of the verification;
12 when the validity of said electronic coupon
13 is confirmed on the basis of a result of the
14 verification, said transferee apparatus requests
15 said coupon issuance/management server to change an

16 owner of said electronic coupon; and
17 in response to the owner change request, said
18 coupon issuance/management server confirms said
19 information terminal, which is a transferor of said
20 electronic coupon, that said information terminal has
21 transferred said electronic coupon, and changes said
22 owner identification information.

1 8. The electronic transaction method according to
2 claim 1, wherein said coupon issuance/management
3 server sets a term of validity to said electronic
4 coupon, and records and manages information on said
5 term of validity as a part of said coupon management
6 information in said transfer management memory.

1 9. The electronic transaction method according to
2 claim 1, wherein said coupon issuance/management
3 server records and manages progress information on a
4 status of progress of issuance and transfer of said
5 electronic coupon as a part of said coupon management
6 information in said transfer management memory, and
7 carries out a process according to said progress
8 information in said transfer management memory.

1 10. The electronic transaction method according to
2 claim 2 or 3, wherein said coupon issuance/management
3 server reads said coupon management information from

4 said transfer management memory in response to the
5 notice, and carries out a charging procedure for
6 charging a user of said information terminal, which
7 is a transferor, identified by said owner
8 identification information an amount corresponding
9 to said pecuniary value information.

1 11. The electronic transaction method according to
2 claim 10, wherein said coupon issuance/management
3 server generates charge information of an amount
4 corresponding to said pecuniary value information and
5 accumulates said charge information in a charge
6 information memory, periodically reads said charge
7 information from said charge information memory, and
8 totalizes said charge information to periodically
9 carry out said charging procedure.

1 12. The electronic transaction method according to
2 claim 11, wherein in response to a value conversion
3 notice about said electronic coupon from said
4 information terminal, said coupon
5 issuance/management server reduces an amount
6 corresponding to said pecuniary value information of
7 said electronic coupon from said charge information
8 in said charge information memory when said charge
9 information is negative at the time of the totaling,
10 and carries out a procedure of transferring an amount

11 corresponding to said charge information to a user of
12 said information terminal identified by said owner
13 identification information.

1 13. The electronic transaction method according to
2 claim 1, wherein said information terminal holds said
3 electronic coupon in a terminal-side memory, to which
4 an access is inhibited or allowed by inputting
5 password information, and inhibits an access to said
6 electronic coupon by inputting said password
7 information.

1 14. The electronic transaction method according to
2 claim 13, wherein, when transferring said electronic
3 coupon to said transferee apparatus, the information
4 terminal allows an access to said terminal-side memory
5 by inputting said password information, reads said
6 electronic coupon from said terminal-side memory, and
7 sends said electronic coupon to said transferee
8 apparatus.

1 15. The electronic transaction method according to
2 claim 13 or 14, wherein said information terminal
3 holds said electronic coupon in an IC card, an access
4 to said IC card being inhibited by inputting a personal
5 identification number (PIN) as said password
6 information, and allowed by inputting a PIN block as

7 said password information.

1 16. The electronic transaction method according to
2 claim 13, wherein said information terminal has a
3 displaying means, and records and manages information
4 on a status of progress of transfer of said electronic
5 coupon in said terminal-side memory, and can display
6 said information on said displaying means.

1 17. An electronic transaction system using an
2 electronic coupon comprising:

3 an electronic shop server opening an
4 electronic shop site on Internet, and operating and
5 managing said electronic shop site;

6 a coupon issuance/management server issuing
7 and managing an electronic coupon having pecuniary
8 value information usable in a settlement of an
9 electronic transaction for said electronic shop site;

10 an information terminal being able to access
11 to said electronic shop to carry out an electronic
12 transaction;

13 said information terminal comprising:

14 a coupon issuance requesting means
15 requesting said coupon issuance/management server to
16 issue said electronic coupon;

17 said coupon issuance/management server
18 comprising:

19 a coupon issuing means issuing an
20 electronic coupon having pecuniary value information
21 and owner identification information based on
22 information characteristic of said information
23 terminal to said information terminal in response to
24 a request from said information terminal;

25 a transfer management memory
26 recording pecuniary value information and owner
27 identification information of said electronic coupon
28 as coupon management information; and

29 a coupon owner changing means
30 changing said owner identification information in
31 said transfer management memory according to a
32 transferee apparatus of said electronic coupon.

1 18. A coupon issuance/management server for use in an
2 electronic transaction system using an electronic
3 coupon comprising an electronic shop server opening
4 an electronic shop site on Internet, and operating and
5 managing said electronic shop site, a coupon
6 issuance/management server issuing and managing an
7 electronic coupon having pecuniary value information
8 usable in a settlement of an electronic transaction
9 for said electronic shop site, and an information
10 terminal being able to access to said electronic shop
11 site to carry out an electronic transaction, said
12 coupon issuance/management server comprising:

13 a coupon issuing means issuing an electronic
14 coupon having pecuniary value information and owner
15 identification information on said information
16 terminal to said information terminal in response to
17 a request for issuance of said electronic coupon from
18 said information terminal;

19 a transfer management memory recording said
20 pecuniary value information and said owner
21 identification information of said electronic coupon
22 as coupon management information; and

23 a coupon owner changing means changing said
24 owner identification information in said transfer
25 management memory according to a transferee apparatus
26 of said electronic coupon.

1 19. The coupon issuance/management server according
2 to claim 18, wherein said coupon owner changing means
3 comprises a terminal-to-electronic shop owner
4 changing means changing said owner identification
5 information in said transfer management memory to
6 information characteristic of said electronic shop
7 server when receiving a notice from said information
8 terminal or another information terminal that said
9 electronic coupon has been transferred to said
10 electronic shop server due to an electronic
11 transaction in said electronic shop site.

1 20. The coupon issuance/management server according
2 to claim 18, wherein said coupon owner changing means
3 comprises a terminal-to-terminal owner changing
4 means changing said owner identification information
5 in said transfer management memory to information
6 characteristic of said another information terminal
7 when receiving a notice from said information terminal
8 that said electronic coupon has been transferred to
9 said another information terminal.

1 21. The coupon issuance/management server according
2 to any one of claims 18 through 20, wherein said coupon
3 issuing means comprises an electronic signature means
4 affixing electronic signatures on said pecuniary
5 value information and said owner identification
6 information of said electronic coupon with different
7 encryption keys.

1 22. The coupon issuance/management server according
2 to claim 21, wherein said electronic signature means
3 comprises:

4 a server private key signature means affixing
5 said electronic signature on said pecuniary value
6 information of said electronic coupon with a server
7 private key characteristic of said coupon
8 issuance/management server; and
9 a user private key signature means affixing

10 said electronic signature on said owner
11 identification information of said electronic coupon
12 with a user private key characteristic of a user of
13 said information terminal.

1 23. An information terminal for use in an electronic
2 transaction system using an electronic coupon
3 comprising an electronic shop server opening an
4 electronic shop site on Internet, and operating and
5 managing said electronic shop site, a coupon
6 issuance/management server issuing and managing an
7 electronic coupon having pecuniary value information
8 usable in a settlement of an electronic transaction
9 for said electronic shop site, and an information
10 terminal being able to access to said electronic shop
11 site to carry out an electronic transaction, said
12 information terminal comprising:

13 a coupon issuance requesting means
14 requesting said coupon issuance/management server to
15 issue said electronic coupon;

16 an electronic coupon receiving means
17 receiving an electronic coupon issued from said coupon
18 issuance/management server in response to the request,
19 said electronic coupon having said pecuniary value
20 information and owner identification information
21 based on information characteristic of said
22 information terminal;

23 a terminal-side memory holding said
24 electronic coupon received by said electronic coupon
25 receiving means;

26 a displaying means; and

27 a record/display controlling means
28 recording information on a status of progress of
29 transfer of said electronic coupon in said
30 terminal-side memory and managing said information
31 therein, and being able to read out contents of record
32 in said terminal-side memory to display said contents
33 on said displaying means.

1 24. The information terminal according to claim 23,
2 wherein an access to said terminal-side memory is
3 inhibited or allowed by inputting password
4 information.

1 25. A managing apparatus comprising:

2 a receiving means receiving, via a mobile
3 exchange, an issue request including first
4 information for identifying a portable terminal which
5 can access to a mobile communication network from said
6 portable terminal;

7 a transmitting means transmitting fourth
8 information having second information representing a
9 value and third information for identifying
10 information representing said value to said portable

11 terminal, provided that said portable terminal is
12 charged;

13 a storing means relating said first
14 information with said third information and storing
15 said first information and said third information
16 therein, when receiving a notice including said first
17 information, said third information and fifth
18 information for identifying a terminal of a transferee
19 from said portable terminal, relating said fifth
20 information with said third information and storing
21 said fifth information therein; and

22 a determining means, when receiving said
23 third information and sixth information for
24 identifying another terminal which differs from said
25 portable terminal from said another terminal,
26 determining whether or not said sixth information
27 coincides with said fifth information related with
28 said third information and stored in said storing
29 means, determining that said another terminal is valid
30 as an owner of said fourth information when said sixth
31 information coincides with said fifth information,
32 and determining that said another terminal is not
33 valid as an owner of said fourth information when said
34 sixth information does not coincides with said fifth
35 information.

1 26. The managing apparatus according to claim 25,

2 wherein said managing apparatus is connected to
3 Internet via a gateway apparatus, and said terminal
4 of a transferee is another server connected to said
5 Internet.

1 27. A portable terminal comprising:

2 a transmitting means transmitting an issue
3 request including first information for identifying
4 said portable terminal to an issuing/managing
5 apparatus via a mobile exchange;

6 a receiving means receiving fourth
7 information having second information representing a
8 value and third information for identifying
9 information representing said value, provided that
10 said portable terminal is charged; and

11 a transmitting means transmitting said
12 fourth information to another terminal, and
13 transmitting said first information, said third
14 information and sixth information for identifying
15 said another terminal to said issuing/managing
16 apparatus via said mobile exchange.